

## BACHELOR OF SCIENCE IN COMPUTATIONAL MATHEMATICS

**Stu ID:** \_\_\_\_\_  
**Name:** \_\_\_\_\_  
**Major:** Computational Mathematics - BS \_\_\_\_\_  
**Minor:** \_\_\_\_\_

**Date:** \_\_\_\_\_  
**Advisor:** \_\_\_\_\_  
**Catalog:** 2018-19 \_\_\_\_\_  
**Grad date:** \_\_\_\_\_

### **MAJOR COURSES**

15 courses; Minimum 30 credits required; 36 credits must be from SU

CSC54-184	Computer Science I		
CSC54-284	Computer Science II		
CSC54-384	Discrete Mathematics		
CSC54-394	Computer Organization		
CSC54-454	Algorithms		
MAT52-154	Calculus I		
MAT52-254	Calculus II		
MAT52-354	Calculus III		
MAT52-674	Linear Algebra		
MAT52-754	Differential Equations		

Select two courses from the following:

CSC54-414	Operations Research		
CSC54-514	Database Management		
CSC54-524	Introduction to Numerical Analysis		
MAT52-574	Probability and Mathematical Statistics		

Select two additional approved upper level courses in MAT or CSC (3-4cr each):


Select one of the following:

MAT52-894	Senior Seminar in Math Modeling		
CSC54-894	Senior Seminar in Software Engineering		
Math Field Test			

\*\*Statistics (52-114) cannot be used to satisfy any MAT major or minor courses.

### **Required Supporting Courses:**

CHE51-103/101	Principles of General Chemistry/Lab	E&B	0
PHY53-154	Fundamentals of Physics I	E&B	0

Select one of the following:

BIO50-123/121	Living Systems/Invest. Into Living Systems*		
BIO50-133/131	Molecular and Population Genetics/Lab*		

Select one additional course from the following:

BIO50-123/121	Living Systems/Invest. Into Living Systems (if not taken above)*		
BIO50-133/131	Molecular and Population Genetics/Invest. Genetics (if not taken above)*		
CHE51-203/201	Chemical Kinetics & Equilibrium/Lab		
PHY53-164	Fundamentals of Physics II		
PHY53-404	Electronics		

\*The same course cannot be used to satisfy more than one area within the required supporting course section.

### **University Electives and/or Minor (optional):**


### **GENERAL EDUCATION REQUIREMENTS**

At least 30 total credits required, minimum 3 credits required per course

#### **General Education Part I**

*First Year/Adv. Entry Seminar:*

UST05-014 or UST05-214			
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*Foreign Language (3 sem.)*


*Social Justice Course (may double count with any requirement):*

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*2 different FRAs:*


Total Earned Credits:	0
Total Southwestern Credits:	
Total Major Credits:	0
Total Gen Ed Credits:	0

#### **Graduation Requirements:**

Minimum of 127 credits: \_\_\_\_\_  
 Cumulative GPA > 2.0 \_\_\_\_\_  
 GPA > 2.0 for Major and/or Areas of Concentration \_\_\_\_\_  
 All grades C- or higher in major/minor/core? \_\_\_\_\_  
 At least 64 credits completed at Southwestern\* \_\_\_\_\_  
 Less than 56 credits of any 5 digit prefix\*\* \_\_\_\_\_  
 Major credits completed (min 30 required) \_\_\_\_\_  
 60% of Major courses completed at Southwestern (36cr) \_\_\_\_\_  
 Gen Ed has minimum of 30 credits \_\_\_\_\_

#### **Minor (optional):**

Minimum 18 credits \_\_\_\_\_  
 Minimum of 12 credits taken at Southwestern \_\_\_\_\_

#### **Exploration & Breadth (E&B) - Gen Ed Part II**

Six total courses

MAT and CSC major and elective courses cannot be used to satisfy Exploration & Breadth requirements.

Select one course from each of the four following areas:

*Humanities:*

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*Natural Sciences:*

PHY53-154	Fundamentals of Physics I		
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*Social Sciences:*

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*Fine Arts:*

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Select two additional courses from the four areas listed above. Courses must be from different areas and from different subjects from above courses:

CHE51-103/101	Principles of General Chemistry/Lab (DVNS)		

\*Public Speaking, College Writing and Creative Writing courses may not count in Exploration & Breadth

#### **Notes:**

Minimum 2.0 minor courses CGPA

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\_\_\_\_\_

**Other:**

Degree Audit Completed (Due one year before grad date)

\_\_\_\_\_

Grad Application Submitted (Due start of final semester)

\_\_\_\_\_

Approved to be part time in last semester?

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